Small-scale Forestry (2011) 10:37–51
DOI 10.1007/s11842-010-9129-8

Determinants of Preference for Lesser-Known Species among Cabinet-Makers in Oyo and Osun States, Nigeria

Adedapo Ayo Aiyeloja · Olukayode Yekin Ogunsanwo · Adeniyi Peter Asiyanbi

Accepted: 23 August 2010 / Published online: 21 September 2010

Abstract Given increasing population and logging pressures globally, there is a need to study the many lesser-known species (LKS) so as to unveil the potential they have to improve supply of wood and maintain forest sustainability. This study was conducted among cabinet-makers, plank sellers and wood product users in the states of Oyo and Osun in Nigeria. A survey was conducted among 182 respondents, using both multi-stage and purposive sampling. Correlation analysis was used to test for a relationship between years of species emergence on markets and use intensity. The timber price of the lesser-known species was the most important factor governing their selection, with a frequency of 147 followed by durability 143, workability 128 and availability 104. A positive relationship was found between use intensity and year of emergence. Further research is required to generate much-needed information on wood properties, availability, distribution and marketing of the LKS.

Keywords Furniture maker · Timber marketing · Small-scale industry · Wood utilization

Introduction

In 2005, the Food and Agriculture Organization of the United Nations issued a major report, titled 'Global Forest Resources Assessment 2005,' on the status of the world's forests. Based on a 5-year study, the report found that forested areas

A. A. Aiyeloja (✉)
Department of Forestry and Wildlife Management, University of Port Harcourt, Port Harcourt, Rivers State, Nigeria
e-mail: aiyeloja@yahoo.com

O. Y. Ogunsanwo · A. P. Asiyanbi
Department of Forest Resources Management, University of Ibadan, Ibadan, Oyo, Nigeria

throughout the world were declining at a rate of about 7.3 M ha per year (FAO 2005). Resource assessment thus led to the conclusion that wood needs over the next 40 years can only be met by logging 20–40% of the total present standing timber in the natural forest (FAO 2005).

Tropical forests shelter a rich array of flora and fauna, only a small fraction of which scientists have investigated in detail. The most important single characteristic of the tropical forests is its astonishing wealth of species. It is now believed that about half the world's species occur in tropical rainforests although these forests occupy only about 7% of the land area (Richards 1975). Whitmore and Sidiyasa (1986) recorded 73 species of trees on 1 ha in Africa. Gentry (1988) reported 138 species on a plot of 0.64 ha at Korup National Park, Southwest Cameroun. Loss of species diversity arises from deforestation in the tropics, which continues relentlessly and on a vast scale, driven in part by the widespread logging of highly prized tropical timbers. Not only are tropical forests being rapidly exploited, but the pattern of exploitation is highly wasteful.

In trying to utilize the diverse tropical wood species, users have chosen species based on diverse considerations, including social and economic factors. This has led to a large numbers of species generally being referred to as *lesser known species* (LKS), *lesser used species* (LUS), *unpopular* species and *secondary species* (Freezaillah 1984). The term *lesser known species* does not imply that the species are unknown, but rather they presently constitute the bulk of wood that finds no economic use (Barany et al. 2003).

Hansom (1983) and ITTO (2007) described lesser-known species as those species for which current commercial demand is below their forest production potentials. Freezaillah (1984) also defined an LKS as a commercially less accepted species left in the forest after a logging operation. In this context, LKS have also been called *secondary species*, *unpopular species*, *non-obligatory species* and *weed species*.

More efficient species utilization of LKS requires information on their technical, physical andchemical properties, as well as availability and abundance. This information is very important in maintaining the sustainability of tropical ecosystems, especially species diversity. According to Freezaillah (1984), about 93% of tropical forest volume consists of LKS, many of which are presently being burnt or otherwise wasted through logging operations, agricultural conversion (including shifting cultivation), hydroelectricity projects and conversion into plantations.

The present day furniture industry has grown largely as a result of unfolding knowledge of wood properties and technological advancement in wood conversion efficiency. Timber of various qualities is now utilized, based on technical engineering and wood aesthetics, which imposes increasing pressure on the highly demanded and large-girth species in the natural forests, consequently rendering them scare and in some cases endangered (Oni 2006). This has led to increase in the use of lesser-known species which is equally important for sustainable forest management (Darby 1999). Although, the list of the commercially utilized species is growing as a result of technological advancement and scarcity of once preferred species, the whole list still remains almost insignificant when compared with the percentage of the lesser-known species that make up the tropical forests. For

instance, a study in Bolivia's Chapare region found that only 1% of felled trees were used and the 'uncommercial' wood was burnt (OAS 1984). Also in Nigeria, only 60 species out of the recorded 560 are currently considered commercially important with attention frequently restricted to only about 35 of them (Nwoboshi 1982). ITTO (2007) also reported that three species—*Triplochiton scleroxylon, Entandrophragma cylindricum* and *Lophira alata*—account for about 60% of current wood export in Cameroun, leading to loss of genetic resources among other things.

The endearing properties of wood—physical, mechanical and chemical–have made it indispensable in everyday life. From its use as a viable source of energy to the structural use and to industrial use for paper, chemicals and other products, wood has found a niche in the sphere of human living. Its demand continues to be on the increase due to factors of renewability and high versatility, which place wood above other material competitors for construction, furniture and other uses (Ogunsanwo 2001). As the rate of consumption continues to increase, researchers have noted one of the problems of the wood industry as its inefficient species utilization (Whitmore and Sayer 1992). In Malaysia, it has been predicted that by 2010, tree harvesting practices will lead to complete exploitation of most of the primary production forests, and the secondary forests that will need to be tapped will contain many lesser known or used species (LKS) that have not been previously utilized (ITTO 2007). Richards (1975) described an effect of this trend when he argued that the extraction on a *polycyclic system* (repeated removal of selected trees in a continuous series of felling cycles the length of which is less than the rotation age) tends to result in the formation of gaps in the forest canopy, because of the very species-rich nature of most tropical rain forests, and the relatively small number of species of timber that is commercial by current standards.

Questions arise concerning identifying of which species constitute the lesser-known species, and what ought to form the basis for the selection and use of lesser-known species. Besides, there is also the need to determine what guides the choice of the lesser-known species in quarters where they are already being used, and match this with the properties of these species on which information is presently insufficient. The objectives of the research reported here have been to make a compendium of the LKS in Oyo and Osun States, categorize them based on their years of emergence into the timber market, identify the factors considered in use selectivity, and assess the relationship between use intensity of LKS and their years of emergence on the timber market.

Determinants of Preference for Wood Species among Cabinet makers

Various factors affect the choice of timber species of cabinet makers. In a study in the Wet Tropics of Australia, Herbohn et al. (2004) observed that timber availability, suitability, customer request and colour and grain are the most important factors in the decision of cabinet-makers to select a particular species. Other factors may include durability and natural resistance. Timber price only becomes important when it cannot be passed onto the purchaser. It is not uncommon to find interplay of two or more of the individual factors. However, availability may

prove to be an overriding factor, since other factors depend on whether the species is available.

A list of factors influencing selection drawn up by Simpson and TenWolde (1999) includes the value of appearance properties—including texture, grain pattern and colour—which may be evaluated against the influence of characteristics such as machinability, dimensional stability and decay resistance. A further list of selection factors has been provided by Gresham (1995), who suggested that the the purchase of timber by firms manufacturing wood products is influenced by (in order of priority): colour, grain, volume availability, end-use range, price and physical properties. However, it is also clear that cabinet-makers are responding to market conditions where the high demand for indoor furniture and kitchens appears to be for a low-cost product made from a serviceable material. This evidence conflicts with Gresham's suggested order of priority for the factors influencing choice of timber product. Cabinet-makers, driven by customer demand, *are* willing to sacrifice quality for cost and serviceability.

The Nigerian Furniture-Making Industry

It has been observed that the furniture manufacturing industry is the most widely distributed of all wood-based industries in Nigeria, with its tentacles spread from Lagos State in the South-west to Edo State in the South-south, and Kano State in the North-centre As noted by Olorunnisola (2000), the industry is divided into three distinct groups based on scale of operation.

1. Small-scale furniture workshops which are typically operated as one-man businesses in make-shift sheds and similar structures. The majority of such workshop owners tend to have limited access to investment capital. They therefore adopt largely manual production tools and labour-intensive technologies and turn out a wide range of relatively low-cost, homogenous brands of residential, office and school furniture items largely on request from their customers. This category of furniture makers is common in virtually all the cities and towns in Nigeria, and they constitute the largest group of furniture makers in the country.
2. Medium-scale furniture establishments with greater financial resources. These establishments usually employ technical equipment for production and sometimes have joint ownership, particularly in form of partnerships. They are more likely to be found in the relatively large towns rather than villages. They also tend to employ a trained workforce and specialize in some form of furniture production.
3. Large-scale furniture establishments which usually operate as factories in which heavy wood processing equipment is installed for furniture production. They are often operated as limited liability companies, or as integrated parts of major wood-processing establishments, such that they have an in-house supply of wood raw material. For instance, it is typical for such factories to form part of a major sawmilling or plywood manufacturing organisation as exemplified by the furniture production arm of Calabar Woods (formerly Serum Woods) in

Calabar, Cross-River State. These furniture establishments usually operate their own dry kilns. They tend to produce better-made and more highly priced furniture products for a different set of clientele than those served by the medium and small-scale establishments.

The Use of Lesser Known Species in Nigeria

While much research has been conducted in Nigeria on traditional timber species, little research has been reported on the LKS (Ogunsanwo et al. 2006; Ajala 2006). Presently there is no database of what species constitute the LKS in Nigeria and their properties by region or even nationally. Instead, the bas-s for choosing which species are lesser known is relative and subject to individuals' discretion and experience.

Nigeria has been reported to have over 600 species of timber (FEPA 1999), but less than 10% of these species are well-known and widely used. It is thus clear that most of the species of timber present in Nigeria are still under the LKS group. For instance, Oni (2006) listed 11 species–*Tectona grandis, Gmelina arborea, Milicia excelsa, Termilania superba, Termilania ivorensis, Mansonia altissima, Khaya sp. Sterculia setigera, Afzelia africana, Acacia auriculiformis and Cordia platythyrsa*–for conservation in Oyo State. This is a pointer to the few species that have been under pressure of use for several years, especially because this list is synonymous to the list of the prime species in use in the state and in many other states of the federation.

The UN (1996) also reported that there are several signs of progress being made in the increased utilization of lesser-used species in the international timber market. It added that in Cameroon, export of secondary species had doubled in the past 3 years; in Malaysia, the export of logs under the mixed-hardwood category accounted for about 600,000 m^3 in 1993, representing more than the export of any individual traditional species. In addition, it has been noted that markets for LKS could increase the value of forests, contributing to the viability of the new forest concession system, (Barany et al. 2003) and since this is most desirable if there will continue to be adequate supply of wood then the future is bright for the LKS.

The Study Area

This includes Oyo and Osun States of Nigeria. Oyo State lies approximately between latitude 7°N and 9°N, and longitude 2.5°E and 5°E. It covers an area of 24,859 km^2 representing approximately 4.08% of Nigeria's total land area. It is bordered in the south by Ogun State, in the west by the republic of Benin, in the north by Kwara State and in the east by Osun State. As at 2006, Oyo State had a population of 5.6 M (NPC 2006). Osun State covers an area of 8,380 km^2 with a population of about 2.16 M (NPC 2006). It is bounded by Oyo, Ogun, Ondo, Ekiti and Kwara States in the West, South, East, East and North respectively.

Research Method

Two states, Osun and Oyo, were purposively selected (having been a single state before separation in 1991). Three senatorial districts were randomly selected in each state, these being Ikirun, Ikire and Ife senatorial districts in Osun State, and Ogbomoso, Ibadan and Saki in Oyo State. One town was chosen in each selected senatorial districts, based on importance of the cabinet industry.

A questionnaire was developed, designed to collect information about lesser known tree species used in cabinet industries. A total of 120 questionnaires were distributed to the cabinet-makers, 20 in each town. Thirty questionnaires were also distributed to consumers. Sixty plank sellers were interviewed in all, 10 from each town, i.e. 210 in total. Four competent research assistants were employed for the administration of the questionnaires. Respondents who could read filled the questionnaire with the assistance of research assistants, while interviews were conducted with illiterate respondents.

Descriptive and inferential analyses were derived using SPSS 11 and Microsoft Excel, while association between the intensity of use in terms of frequency of mention, and year of emergence (introduction to timber market), was determined using correlation procedure.

Results

A total of 188 questionnaires were analysed due to inconsistencies in the remaining 22. These included 102 respondents for the cabinet makers (85%), 30 cabinet users (100%), and 56 plank sellers and sawyers (93.33%). All the cabinet-makers that responded were male. This reveals that cabinet making is still an occupation solely for the male. Most of the cabinet-makers fall into the age range of 21–39 years; only about 6% are 50 years or more in age (Table 1). That is, cabinet making is mainly carried out by young adults. Notably these figures exclude teenage apprentices.

The highest education level completed by more than half the respondents was primary schooling, and only about 3% had progressed beyond secondary school (Table 2). This shows that level of education among cabinet-makers is very low. The vocation is seemingly left for the unschooled.

More than 90% of the cabinet-makers had undertaken an apprenticeship (Table 3). This corroborates the previous information on highest educational

Table 1 Age distribution of cabinet-makers

Age class (years)	Frequency	Relative frequency (%)
Below 20	3	2.9
20–29	39	38.2
30–39	40	39.2
40–49	14	13.7
50 and above	6	5.9
Total	102	100

Table 2 Education level of cabinet-makers by highest academic qualification

Highest education level completed	Frequency	Relative frequency (%)
Primary school certificate	55	53.9
Secondary school certificate	33	32.4
Nigerian certificate of education/ Ordinary National Diploma	11	10.8
Higher National Diploma/Bachelor	1	1.0
Other	2	2.0
Total	102	100

Table 3 Skill acquisition method for cabinet-makers

Source of cabinet-making skill	Frequency	Relative frequency (%)
From school	6	5.9
Apprenticeship	94	92.2
Family lineage	2	2.0
Others	0	0
Total	102	100

Table 4 Years of experience of cabinet-makers

Year	Frequency	Relative frequency (%)
Up to 10	44	43.1
11–20	35	34.3
21–30	15	14.7
31 and above	8	7.8
Total	102	100

attainment. The majority of the cabinet-makers do not go to a technical college to learn cabinetry, but rather learn the art from vocational masters as apprentices.

Table 4 summarizes the length of experience of cabinet-makers. About 43% had spent 10 or less years in the business, and only about 8% had more than 30 years experience. This reflects a natural trend of a growing venture. The cabinet industry is responding to the increasing demand for furniture by the teeming human population.

The Pearson correlation coefficient was used to assess the relationship between use intensity as portrayed by frequency of usage and years of emergence of the LKS. A correlation coefficient of 0.407 was obtained. This indicates that although there is positive correlation, use intensity is not absolutely determined by years of emergence.

Frequency of mention as shown in Table 5 signifies use intensity and availability of species. Species with higher frequency are likely to have higher use intensity and are also likely to be more available.

Table 5 Lesser known species, use intensity and substitutes

Species	Local name	Family	Frequency of mention	Substitute
Syzygium guineense	*Adere*	Myrtaceae	9	Babo
Chrysophylum albidum	Agbalumon*	Sapotaceae	–	–
Brachystegia eurycoma	Ako	Caesalpinaceae	24	Iroko
Markhamia tomentosa	Akoko*	Bignoniaceae	–	–
Pycnanthus angolensis	Akomu	Myristicaceae	2	Efo
Cleisthopholis patens	Apako	Annonaceae	3	–
Ericarpus sp.	Ara		16	Apa
Ceiba pentandra	Araba, Ogungun	Bombacaceae	29	–
Babo	Babo		17	Ara
Anacardium occidentalis	Cashew*	Anacardiaceae	–	–
Cassia sp.	Cassia	Caesalpinaceae	5	–
Azadiracta indica	Dongoyaro*	Meliaceae	–	–
Treculiar Africana	Efo	Moraceae	4	–
Butyrospermum paradoxum	Emi	Sapotaceae	1	–
Ricinodendron heudelotii	Epuu	Euphorbiaceae	15	–
Eriri	Eriri		2	Iya
Erythrophylum ivorense	Erun*	Caesalpinaceae	–	–
Artocarpus attilis	Gbere/MTN	Moraceae	4	Araba
Gmelina arborea	Gmelina	Verbenaceae	55	–
Parkia biglobosa	Igba	Mimosaceae	7	Mango
Alstonia boonei	Ihun/Ahun	Apocynaceae	8	–
Ficus exasperate	Ipin	Moracea	3	Epuu
Funtumia elastic	Iree	Apocynaceae	20	Ayunre
Blighia sapida	Isin	Sapindaceae	2	–
Celtis integrifolia	Ita	Ulmaceae	23	–
Daniellia Ogea	Iya	Ceasalpinaceae	26	Ori
Spondias mombin	Iyeye*	Anacardiaceae	–	–
Sterculia oblonga	Koko'gbo	Sterculiaceae	8	–
Amphimas pterocarpoides	Koleagbe	Papilionaceae	1	–
Kuere	Kuere		2	Emi
Boscia augustifolia	Lahoro	Capparacea	2	–
Santalum album	Lofinda	Santalaceae	1	–
Mangifera indica	Mango	Anacardiaceae	7	Igba
Cola nitida	Obi	Sterculiaceae	3	Agbohin
Ficus mucuso	Obobo	Moraceae	28	–
Odugbe*	Odugbe*		–	–
Canarium schweinfurthii	Ole	Burselaceae	28	–
Tetracera alnifolia	Opan	Dilleniaceae	2	–
Elaeis guineensis	Ope*	Palmaceae	–	–
Pterygota macrocarpa	Oporoporo	Sterculiaceae	5	–
Vitex doniana	Ori	Verbenaceae	15	Iya

Table 5 continued

Species	Local name	Family	Frequency of mention	Substitute
Antiaria afrricana	Oriro	Sterculiaceaea	19	Obobo
Irvingia gabonensis	Oro	Irvingiaceae	2	–
Malacantha alnifolia	Osan	Sapotaceae	4	Gmelina
Chrysophylum delevoyi	Osandan	Sapotaceae	13	–
Oyedu*	Oyedu*		–	–
Oyodo*	Oyodo*		–	–
Triaspis monadelpha	Rere	Malpighiaceae	1	Epuu
Delonix regia	Sekeseke*	Caesalpinaceae	–	–

Species marked with an asterisk are those that were listed as new (LKS) but with which cabinet-makers were not willing to identify because they consideered these species inferior or rarely if ever used, hence the paucity of information about them. Frequency of mention as reported in the table above signifies use intensity and availability of species. Species with higher frequency are likely to have higher use intensity and are also likely to be more available

Table 6 shows that price, durability, workability and availability are the most important factors in species choice.

The most frequently considered factor for stocking species among respondents is the availability of species (46.4%). That is, they purchase the species that are available in the field. Twenty-one (37.5%) consider the demand trend in the market while eight (14.3%) consider the amount of money they have in hand. Only two (3.6%) of the respondents stock to meet orders. The unavailability of many desired species and the uncertain availability of the species occasioned by the lack of inventory of species and difficulties associated with logging in the rainforest all work to ensure that people only buy the regularly available species. This trend is likely to continue unless deliberate efforts are made to plant species of interest and also protect them where they occur naturally.

Species that are presently listed as scarce and those most utilized are reported in Table 7. Notably, most of the species listed on one side are listed on the other side as well. These species are highly vulnerable and require serious conservation effort.

Discussion

Although Nigeria is said to have about 600 species of timber (FEPA 1999), about 107 are currently being sawn in Osun and Oyo States; 52 are regarded as new or lesser used while less than 60 have been used traditionally so are not regarded as lesser known. Durability is considered the most important factor for using lesser-known species. This is similar to the sorting of the LKS of Bolivia carried out by Barany et al. (2003), where durability was next only to availability of information. As such, durability is a key factor in wood preference, especially for LKS on which very little technical information is available, since durability is only a function of time—how long a wood type can stay intact on shelf or in service.

Table 6 Determinants of preference for lesser known species

Species	No Reason	It's cheap	More available	Customers' request	Workability	Wood properties	People's recommendation	Durability	Aesthetics
Adere	2	2	1		2	4	–	3	–
Agbalumon*	–	–	–	–	–	–	–	–	–
Ako	7	3	5		8	4		5	6
Akoko*	–	–	–	–	–	–	–	–	–
Akomu	1	–	–	–	1	–	–	–	–
Apako	–	–	1	–	1	1	–	1	–
Ara	2	1	12	18	11	5	–	19	20
Araba	3	32	10	2	8	5	–	–	
Babo	5	3	3	–	–	4	–	5	1
Cashew*	–	–	–	–	–	–	–	–	–
Cassia	1	–	–	–	–	1	–	4	1
Dongoyaro*	–	–	–	–	–	–	–	–	–
Efo	–	2	1	–	2	2	–	2	–
Emi	1	–	–	–	–	–	–	–	–
Epuu	3	12	4	–	1	4	–	–	–
Eriri	1	1	–	–	–	–	–	–	–
Erun*	–	–	–	–	–	–	–	–	–
Gbere	–	2	3	–	1	–	–	–	–
Gmelina	13	14	27	18	25	13	2	27	16
Igba	–	7	4	–	1	1	–	1	1
Ihun/Ahun	–	6	–	–	–	1	–	2	–
Ipin	1	–	1	–	–	2	–	1	–
Iree	4	3	3	2	7	2	1	8	3

Table 6 continued

Species	No Reason	It's cheap	More available	Customers' request	Workability	Wood properties	People's recommendation	Durability	Aesthetics
Isin	1	–	–	–	–	1	–	–	–
Ita	3	3	2	2	6	5	1	15	–
Iya	2	15	11	3	5	4	–	5	1
Iyeye*	–	–	–	–	–	–	–	–	–
Koko'gbo	2	–	–	–	2	3	–	5	–
Koleagbe	–	1	–	–	1	–	–	–	–
Kuere	–	–	–	–	–	1	–	1	1
Lahoro	–	–	–	–	1	–	–	1	–
Lofinda	–	–	–	–	1	–	–	–	–
Mango	2	3	4	–	–	–	–	–	–
Obi	–	–	–	–	–	–	–	2	1
Obobo	4	11	2	1	9	4	–	11	1
Odugbe*	–	–	–	–	–	–	–	–	–
Ole	4	–	5	10	23	1	–	7	14
Opan	–	1	–	–	–	1	–	1	–
Ope*	–	–	–	–	–	–	–	–	–
Oporoporo	1	1	–	–	1	1	–	2	–
Ori	1	9	2	1	1	5	–	3	–
Oriro	3	15	1	1	1	2	–	3	–
Oro	1	–	–	–	–	1	–	1	–
Osan	1	–	–	–	2	1	–	3	2
Osandan	1	–	2	1	7	1	–	4	8
Oyedu*	–	–	–	–	–	–	–	–	–

Table 6 continued

Species	No Reason	It's cheap	More available	Customers' request	Workability	Wood properties	People's recommendation	Durability	Aesthetics
Oyodo*	–	–	–	–	–	–	–	–	–
Rere	–	–	–	–	–	1	–	1	–
Sekeseke*	–	–	–	–	–	–	–	–	–
Total	70	147	104	59	128	82	4	143	76

Species marked with an asterisk are those that were listed as new (LKS) but with which cabinet-makers were not willing to identify because they thought these species inferior or rarely if ever used, hence the paucity of information about them

Table 7 The 10 most utilized species in the study area (decreasing scarcity and intensity)

Species number	Most utilized species (in order of decreasing scarcity)	Most utilised species (in order of decreasing intensity)
1	Mansonia	Mahogany
2	Teak	Gmelina
3	Omo	Iroko
4	Mahogany	Teak
5	Iroko	Afara
6	Apa	Ayunre
7	Ara	Mansonia
8	Gmelina	Omo
9	Ole	Ole
10	Opepe	Obobo

About 36 LKS became prominent in the last 4 years (Table 5). Although, this is still low compare to the varieties that are there for exploitation—both the indigenous species and exotic ones, it is an indication that the prediction of Adeyoju (1975) that a wider range of timber shall be supplied in Nigeria and that the local market shall be supplied with small dimension lumber if there is to be a full utilization of forest, if the rapidly growing local demand is to be satisfied and if there is to be surplus for export which is financially desirable.—is being fulfilled.

A positive correlation between years of emergence and intensity of use was established. The low use intensity for the more recently adopted species is due to lack of information about and ignorance of the factors that are most crucial to cabinet-makers in choosing species. These factors include in their order of importance, durability, working attributes, cost, aesthetics, availability, information on properties available, and clients' request. When a comparison was made between the list of the scare and the most utilized species, the species that top the list are very much similar in both cases. This finding is similar to that of Whitmore and Sayer (1992) where the list of the prime species that have been prioritized over the years coincides with that of the rare species.

A number of species are identified in this study as deserving special and urgent conservation attention. These species include *Tectona grandis* (Teak), *Cordia milenii* (Omo), *Khaya spp* (African mahogany), *Miliacea excelsa* (Iroko) and *Gmelina arborea* (Gmelina). These species are presently the most utilized and at the same time the most scare locally. These combined forces of intense utilization and non-availability may quickly drive these species into extirpation (localized extinction). The list also correlates with that of Oni (2006).

Conclusion

Like many other tropical countries, Nigeria has the potential to meet its present demand for wood and also have an export surplus. Nigeria has about 600 species of

timber but only about 100 are on sale in the South-west; less than 50 species are regularly in use in the cabinet industry, while about 20 which are high in demand are presently faced with intense scarcity. It is therefore necessary to widen species utilization to increase value and profit, without expanding the area of harvest. Making available information on the resource base, outputs from research and development, as well as carrying out systematic and aggressive marketing and above all, cooperation between consumers and producers are vital in conservation of LKS. This will ensure that subsequent promotion and marketing are based on predictable rates of supply and an adequate level of availability. This information should be distributed widely so that producers, users and marketers of wood products are aware of the promising species with high prices. Efforts at regenerating promising species should be fostered, as research on these species continues to further adjust and manipulate their properties to improve value.

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